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From: "Erben, Susan G (DEC)" <susan.erben@alaska.gov>

To: dec-sulfolane@list.state.ak.us

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Subject: [DEC-Sulfolane] Sulfolane Update No. 18

Dear Concerned Citizen,

The investigation of sulfolane in the groundwater in North Pole is proceeding aggressively this summer. Here are some highlights:

Garden sampling project

The results from the garden sampling project's first sample collection, released Monday, indicate that lettuce, and rhubarb leaves – an inedible part of the rhubarb plant – tested positive for sulfolane, but at levels that aren't considered a health risk, according to the Alaska Department of Health and Social Services' (DHSS) Division of Public Health.

Monday's results were based on the testing of six types of plants from four North Pole gardens. The fact that sulfolane was found in the leafy parts of the lettuce and rhubarb – but not in the roots, stems, fruits or flowers – makes sense, because other plant studies show that sulfolane tends to concentrate where most of the water evaporation occurs, which is typically the leaves, said Lori Verbrugge, a toxicologist and manager of the division's Environmental Public Health Program.

The DHSS released a fact sheet Monday that further explains the concentrations found in the lettuce and rhubarb leaves, the nondetection levels in the other samples (cucumber, radishes, sugar snap peas and zucchini), and the sulfolane concentration in the well water that was used to water the plants. DHSS' fact sheet and press release on the results are available at the Alaska Department of Environmental Conservation's North Pole sulfolane Web site, http://dec.alaska.gov/spar/csp/sites/north-pole-refinery/ . They're also available at the following links:

http://www.epi.hss.state.ak.us/eh/sulfolane/DHSSGardenSamplingEarlyResultsFactSheet.pdf
http://www.hss.state.ak.us/press/2010/Sulfolane_Pr_081610.pdf .

Samples of more vegetables and fruits will be collected later this season as they become available. Results will be made public as soon as possible once they're received. The lab results are usually ready in about three weeks after they're collected.

Gardeners interested in taking part in the garden sampling should contact DHSS' Nim Ha at (907) 269-8028, nim.ha@alaska.gov .

The Technical Project Team overseeing the garden sampling project – as part of its oversight of Flint Hills' overall investigation and cleanup of sulfolane groundwater contamination – is also planning a more in-depth, controlled scientific greenhouse study. The greenhouse study, which may be a multi-year effort, will provide more conclusive answers on the safety of gardening with sulfolane-affected groundwater.

The Technical Project Team has experts in toxicology, environmental chemistry, botany, hydrology and engineering. It includes Verbrugge, Ha and others from DHSS, as well as representatives from DEC, the City of North Pole, U.S. Environmental Protection Agency, Flint Hills, Williams (the refinery's former owner) and specialized technical contractors for various aspects of the project.

Connecting city residents to city water and a permanent

water supply for those outside the city

Twenty-seven residents inside the city limits of the City of North Pole who have private wells affected by sulfolane are in the process of being connected to the city's water system, for a total of 29 connections. That work should be completed by early September by which time a solution should be identified for a permanent water supply for those homes outside the city limits and work can begin on those properties.

Four businesses within the city limits that had their own wells are still receiving bulk water.

Work plans

DEC and Flint Hills have come to a formal agreement on the work to be completed at this site to fully understand the source and extent of the contamination, potential for movement of the contamination, best technology for cleaning it up, and potential risks to human health and the environment.

Those activities are described in two work plans that will be available on the DEC sulfolane Web site within two weeks, along with DEC's formal letter stating Flint Hills' obligation to carry out the activities. A summary of the activities will be available on the Web site as well. The work, which began in November, will continue through this winter and next year.

New city wells

The site for two new drinking water wells for the City of North Pole will be on the Ainley Trust land near Blanket Avenue. Flint Hills has an access agreement and the land purchase will be finalized in two to three weeks.

Drilling for the wells will begin next week; the well installation will take a month to six weeks.

A new mile-long raw water transmission line will run from the site for the new wells on Blanket Avenue to the city's water treatment facility on Fifth Avenue, next to the current wells.

Construction on the transmission line began Aug. 5 and should be finished in about two weeks. The portion that involved North Pole streets was completed this week – Fifth Avenue between Santa Claus Lane and Snowman Lane, plus Snowman Lane between Fifth Avenue and Eighth Avenue. The rest of the line construction won't affect North Pole streets.

The whole project is scheduled to be wrapped up in October.

The city's existing wells

The tests of raw water for both current city wells continue to show very low traces of sulfolane, but the city's water treatment plant has always removed those traces before the water reaches consumers.

Traditionally, Well No. 1 has been used in the winter and Well No. 2 in the summer, mainly to keep Well No. 2 active. But the city has opted to continue using Well No. 1 this summer because the sulfolane levels for Well No. 2 have been slightly higher.

Well No. 1 has been tested three times a month and Well No. 2 once a month, but now that's changing to once a month for both. There were no samples analyzed in July, however, due to a problem at the state lab.

Results from samples collected since May for Well No. 1 are below. A full history of the concentrations will be posted on DEC's sulfolane Web site within two weeks. (The amounts are in parts per billion sulfolane):

	Raw Water	Entry into the Distribution System
Aug. 4	nondetect	nondetect
June 22	4.9 ppb	10.0 ppb
June 16	4.0 ppb	3.3 ppb
June 9	2.9 ppb	3.5 ppb
May 26	4.4 ppb	nondetect
May 19	5.8 ppb	nondetect

For Well No. 2:

	June 2	7.1 ppb	nondetect
Aug. 17	(The sample results will be ready in about a week.)		

(SGS Environmental Services Inc. analyzed the Aug. 4 sample; DEC's Environmental Health Laboratory analyzed the others.)

The recommended maximum level for sulfolane in drinking water is 25 parts per billion, based on findings released in February from the Agency for Toxic Substances and Disease Registry, within the U.S. Department of Health & Human Services. Information on those recommendations, which were done in response to the North Pole sulfolane contamination, is on the DEC sulfolane Web site.

An introduction

On a personal note, I would like to introduce myself. I was hired in mid-June to take Marti Early's place when she retired. I feel honored to work with you on such an important issue.

Susan Erben

Community Involvement Specialist

ADEC – Spill Prevention and Response Division – Contaminated Sites Program

susan.erben@alaska.gov , (907) 465-5206

http://dec.alaska.gov/spar/csp/sites/north-pole-refinery/

For more information :

- On health-related information, contact Nim Ha, Division of Public Health, Alaska Department of Health and Social Services, (907) 269-8028, nim.ha@alaska.gov .

- On contaminated sites, contact DEC: Ann Farris, (907) 451-2104, ann.farris@alaska.gov , Susan Erben, (907) 465-5206, susan.erben@alaska.gov or Denise Elston, (907) 465-5207,

denise.elston@alaska.gov .

- On public water supplies, contact Cindy Christian, DEC, (907) 451-2138,

cindy.christian@alaska.gov ..

- On water testing or other refinery issues, contact Jeff Cook, Flint Hills Resources, (907) 488-5104, jeff.cook@fhr.com .

- To go to DEC's North Pole sulfolane Web site: http://dec.alaska.gov/spar/csp/sites/north-pole-refinery/ .